

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A face detection apparatus generating an output indicative of the likelihood of test regions of a test image containing a face, the apparatus comprising:

[[i)] logic configured to derive a plurality of sets of image attribute data from a test region, each set relating to said test region scaled by a respective different scaling factor from a geometric progression of scaling factors, said progression being such that each scaling factor is related to a next scaling factor by a predetermined multiplicative factor, said factor being the same across the whole progression of scaling factors;

[[ii)] a first comparator configured to compare said derived attributes for each scaling factor with a first respective set of attributes indicative of the presence of a face to generate a first respective likelihood value;

[[iii)] a second comparator configured to compare said derived attributes for each scaling factor with a second respective set of attributes indicative of the presence of a face to generate a second respective likelihood value; said second sets of attributes are indicative of the presence of a central portion of a face in said test region;

[[iv)] a generator configured to generate a combined likelihood value in respect of at least a subset of said scaling factors by combining the first likelihood value applicable to that scaling factor with the second likelihood value applicable to a further scaling factor separated from that scaling factor in the geometric progression by a predetermined number of positions; said generator is operable to combine the first likelihood value applicable to a scaling factor at which said test region represents a certain area of said test image with said second likelihood value applicable to a further scaling factor in which said test region represents a smaller area of said test image, and

[[v]] logic configured to derive a probability of the presence of a face at each scaling factor in the subset by a similarity between said derived attributes and said combined likelihood value in respect of that scaling factor,

Claim 2 (Canceled).

Claim 3 (Original): The apparatus according to claim 1, arranged to derive a combined likelihood value which, across said progression of scaling factors, is indicative of the highest likelihood of a face being present in that test region.

Claim 4 (Original): The apparatus according to claim 1, said apparatus being operable to compare likelihood values across a plurality of different test regions to detect a likelihood value which, across said progression of scaling factors and across said plurality of test regions, is indicative of the highest likelihood of a face being present.

Claim 5 (Original): The apparatus according to claim 1, in which the predetermined multiplicative factor is $\sqrt[4]{2}$.

Claim 6 (Original): The apparatus according to claim 1, in which said generator is operable to combine said first likelihood value applicable to a scaling factor with said second likelihood value applicable to a further scaling factor separated from that scaling factor in said geometric progression by three positions.

Claim 7 (Original): A video conferencing apparatus comprising apparatus according to claim 1.

Claim 8 (Original): A surveillance apparatus comprising apparatus according to claim 1.

Claim 9 (Currently Amended): A method of face detection for generating an output indicative of the likelihood of test regions of a test image containing a face, said method comprising:

[[i]] deriving a plurality of sets of image attribute data from a test region, each set relating to said test region scaled by a respective different scaling factor from a geometric progression of scaling factors, said progression being such that each scaling factor is related to a next scaling factor by a predetermined multiplicative factor, said factor being said same across the whole progression of scaling factors;

[[ii]] comparing said derived attributes for each scaling factor with a first respective set of attributes indicative of the presence of a face to generate a first respective likelihood value;

[[iii]] comparing said derived attributes for each scaling factor with a second respective set of attributes indicative of said presence of a face to generate a second respective likelihood value; said second sets of attributes are indicative of the presence of a central portion of a face in said test region;

[[iv]] generating a combined likelihood value in respect of at least a subset of the scaling factors by combining said first likelihood value applicable to that scaling factor with said second likelihood value applicable to a further scaling factor separated from that scaling factor in said geometric progression by a predetermined number of positions; [[and]] said

generating combines the first likelihood value applicable to a scaling factor at which said test region represents a certain area of said test image with said second likelihood value applicable to a further scaling factor in which said test region represents a smaller area of said test image, and

[[v]] deriving a probability of said presence of a face at each scaling factor in said subset by a similarity between said derived attributes and said combined likelihood value in respect of that scaling factor.

Claims 10-11 (Canceled).

Claim 12 (Currently Amended): A computer readable medium ~~according to claim 11,~~
~~said medium being a~~ storage medium encoded with a computer program to perform the
method of claim 9.

Claim 13 (Canceled).